AMERICAN INTELLIGENCE.

Congenital Encephalocele, with Remarks. By F. H. Hamilton, M. D.—Mary G——, born July 29, 1835; healthy and well featured, except that she has what Naegle has termed an "encephalocele congenital," and which he states "occurs oftenest at the posterior fontanelle," the exact place where this presents. It protrudes two or three inches, and has a base of four inches in diameter, giving a great elongation and enlargement to the occipital region. The edges of the several bones forming the fontanelle, and over which the circumference of the tumour rests, are everted. Tumour soft and pulsating; yields slowly on pressure; not discoloured.

August 11*th*. Child has ophthalmia purulenta. Tumour not diminished.

14*th*. Epileptic fits from excessive dose of anodyne; tumour increasing; bones not everted. ℞. cathartic enema, etc.

June 14, 1836. Since last note, until very recently, the patient has been almost uniformly well; full size, but rather emaciated; playful; learning to talk; intellect evidently precocious; has had a few days past diarrhœa lienteria. ℞. tonic and anodyne.

15*th*. Diarrhœa abated; quite feeble; slight convulsive movements; cough, etc.

16*th*. Increase of yesterday's symptoms; preternatural heat of head; determined, on consultation, to perform Paracentesis capitis to-morrow. The parents being apprised of the state of the case, and fully advised as to the doubtful prospect afforded by the operation for a perfect or even a partial cure, beg that it be not delayed. Head measures in its longest circumference 23½ inches; in its shortest, from ear to ear, 15½.

19*th*. *Operation.*—The parietal bones being firmly compressed by the hands of a cautious assistant, the palm of my left hand resting against the posterior fontanelle, I introduced a small sized trocar with canula into right side of anterior fontanelle, near the angle formed by the junction of the parietal and frontal bones; first in a direction perpendicular to the skull half an inch, then, to insure its complete entrance, I pushed the instrument in a direction forwards three-fourths of an inch. Withdrawing the trocar, the water flowed in a slow stream quite two minutes, when ℥ij. of serum, mixed with a few drops of blood, had been discharged. The child manifested no signs of cerebral irritation. A roller was now applied and the wound closed, with the intention of reopening it soon if no unfavourable symptoms supervened. Four hours after, the child having slept and nursed, and appearing well, the wound was unclosed, and the water allowed to escape stillicidium.

18*th*. Serum constantly discharging; roller been tightened three times; transverse diameter of head evidently diminished; child playful; pulse 115. ℞. sub. mur. hyd. gr. 1-4; digit. purp. gr. 1-8; ant. tart. gr. 1-16 at 8 hours.

19*th*. Stillicidium continues; no change of symptoms; stools natural. Continue yesterday's prescription.

20*th*. Powders nauseate; had several spasms this morning at 8, only in *right* side, continued two hours; pulse 130; stools green; serum accumulates more rapidly than it escapes; head enlarging. Loosen roller; open wound more freely with probe; does not mind the probing. ℞. sup. carb. sod. grs. ij.; Dov. p. gr. j.; sub. mur. hyd. gr. 1-8 at 6 hours.

21*st*. Stools improved; nurses and seems playful; wound discharges copiously, pillows often wet through; discharge estimated equal to ℥viij. in 24 hours; very little diminution of head since the 19th. Continue treatment.

22nd. Return of spasms in *right* side at 3 A. M. Stools green; groans much; cough; discharge continues; ordered to keep open wound freely, as she is more easy when the discharge is abundant. ℞. ipecac. pulv.; sub. mur. hyd. *aa.* gr. 1-8; sup. carb. sod. grs. ij. at 6 hours.

23d. Fæcal evacuations more natural. Suspend powders.

24th. Last night at 11 the spasms returned, making the third time they have recurred at regular intervals of nearly 48 hours; each successive paroxysm anticipating the preceding by 4 or 5 hours; evacuations slimy, thin and green. ℞. Dov. p. gr. j.; ipecac. pulv. gr. 1-8 at 4 hours.

25th. At about 5 this morning, immediately after having nursed and being laid down, a current of limpid water commenced flowing from her mouth, pleno rivo; a profuse clammy perspiration broke out at same moment, drenching all her clothes, and a succession of slight quivers were observed to pass rapidly through her frame. Taking her up, her diaper was found dirty and wet; two more stools immediately occurred, and she again urinated. The pulse was scarcely perceptible, and too rapid to count; head and extremities cold, particularly the right arm. In the course of twenty minutes the fontanelles, before full, became depressed three-fourths of an inch. From this state she gradually revived without medical aid, and is now, 10 A. M., quite easy and free from cough, which has been hitherto very troublesome. ℞. brandy gtta. ij. at half hour.

From this time until her death, which occurred on the 3d of July, very little of interest presented. The spasms continued to return at the same intervals, and invariably in the *right* side, until the day preceding her death, when, having nearly spent their force in a very protracted paroxysm on the *right* side, they suddenly attacked the *left* with such violence as to threaten immediate dissolution. After the singular phenomena on the 25th, the water accumulated in the head much more slowly, and the discharge greatly diminished. The pupils were at no time insensible to the stimulus of light.

Autopsy, twenty-four hours after death.—General emaciation of body. Greatest circumference of head 22½ inches; smallest, from ear to ear, 14¼. Length of posterior fontanelle, antero posteriorly, 6½ inches; length of anterior, 3¾. Fontanelles much depressed; parietal bones overlapping. No marks of inflammation about the wound externally. Carrying up the integuments and occipito-frontalis muscle together, the tendon of the latter was found firmly adherent to the pericranium on the posterior part of right parietal bone. In upper part of posterior bregma lay five ossa triquetra, varying from ¼ to 1½ inches in diameter, very thin and flexible. To ascertain whether it would have been practicable to have discharged the water and approximate the bones more than already done, the parietal bones having met on the third day, but the occipital being yet widely separated from them, I punctured the posterior fontanelle and discharged 1 pint and ¾, composed chiefly of a bluish-yellow serum, and partly of thin pus, light straw-coloured and inodorous. I then attempted to bend the occipital towards the parietal bones, but no force short of what was sufficient to produce a fracture would effect an approximation of half an inch. The frontal and parietal bones offered the same resistance, being firmly united to the other cranial bones at their base. Removing the calvarium, with dura mater adherent, no trace of inflammation could be discovered in the vicinity of the wound made by the trocar—no congestion, adhesion, lymph, nor pus. The wound had not penetrated the tunica arachnoidea. The superior longitudinal sinus passed entirely on the left side, and where it crossed the posterior fontanelle it lay one inch from the mesian line. Much serum, with loose gelatinous matter, lay between the dura mater and arachnoid membrane. The arachnoid of the right hemisphere retained its natural appearance and situation; over the left it formed a large bleb, or sac, thickened and opaque, and raised to a level with the opposite hemisphere. The sac, when opened, discharged a large quantity of clear serum, and exposed a surface covered only by the pia mater, and sunk two inches below the level of the corresponding hemisphere; the deficiency existing in front as low as the centrum ovale proper, and in rear as low as the posterior horn of the left lateral ventricle, which horn was entirely laid open, its floor forming a part of the depressed surface. The face of this portion of brain was much more rough and vascular than natural, appearing somewhat like the large fungous growths of hernia cerebri; and its edges suddenly caved in, like the margin of an ill-conditioned ulcer. The cortical substance over most of this surface retained its usual thickness, except where the ventricle was exposed, the deficiency being more in the medullary than cortical substance. The ventricles all enormously distended; their parietes smooth, shining, and unusually hard—the fourth alone contained serum, mixed with lymph; the others were emptied in the first incision of the arachnoid sac. The foramen of Munro ¾ of an inch in diameter, and the thalami separated. The plexus choroides gorged; the hyppocampi lost in the extension of the floor of the ventricle; the pineal gland involved in a mesh of the velum interpositum and organized fibrin; the tubercula flattened. The right lobe of the cerebellum natural, the left hypertrophied; the medulla oblongata invested with loose lymph. The entire substance of brain more or less clotted with turgid vessels, and unusually hard. Accurate weight of brain with meninges, serum drained off, 12980 grs.

Remarks.—Whatever difference of opinion may exist with regard to the essential or proximate cause of chronic hydrocephalus in general, we presume no one will doubt it to have been in *the present case* cerebral irritation. The congenital encephalocele first described, the exuberant growth of the cranial bones, the hypertrophy discovered on dissection, the serum, the lymph, the gorged vessels, and hardened cerebral structure, are all confirmative evidences of the existence of a previously unnatural excitement in the encephalic vessels. From notes of seven autopsic examinations of hydrocephalic heads which we have witnessed, four of which were chronic, the same inferences are obtained; and from the numerous cases reported by others, whose observation has been much more extensive, we find no reasons to authorize a different judgment with regard to the proximate cause of the effusion. We are not at all an advocate of exclusive doctrines—neither do we hold that pathological investigations are the *invariable* tests of correct theory—and yet the doctrine of irritation, as applied to the disease under consideration, we affirm to be alone correct; because pathology only fails as the *invariable* guide to correct theory, when discrepant phenomena are presented in the examination of different specimens of the same disease: a discrepancy which, in our opinion, has never occurred in reference to chronic hydrocephalus. No *positive* proofs of cerebral debility have ever been shown from cadaveric inspections, but the *negative* evidence alone of an occasional absence of inflammatory signs, which merely implies that previous to dissolution, and *in articulo mortis*, no lesion had yet occurred, and the vessels were in a normal state of fulness—a condition which every pathologist knows to be perfectly consistent with a previously excited and turgid condition of the circulatory system. We therefore assert that we are *not at liberty* to discredit our own doctrine, until the advocates of a different one, rest their opinions upon something more solid than the mere *negative* proofs afforded by pathological inspections. If they retreat from these open grounds of demonstrative facts and fall back upon their reserve, *the result of practice*, we leave them—they are retreating into a fog of mysticism. The well attested fact that stimulants remove dropsical effusions we concede, and also claim as the result of equal experience the doctrine of the pyretologists, that stimulants abate inflammatory action. We even acknowledge that arachnoid effusion may be hastened by depletion; and yet we *know* it to be more certainly promoted by stimulation. How shall we conciliate such discrepancies? We reply—by pathology, and not by practice. The tests of the former are generally uniform—of the latter, always various and uncertain. The application of the argument to the case under notice is plain—*dissimilar* causes have produced *similar* results. The actual pathological conditions are the same in either case, viz. an excited condition of the capillaries—the one is the result of direct stimulation, the other of indirect. In the latter case an irregular irritative action has resulted like that which occurs in hectic, and which may determine to one or another organ, according as this or that may be predisposed.

We might go farther in unfolding the discrepancies of results of practice, and still more clearly expose the fallacy of erecting a theory upon these alone. We might also give in more minute detail our particular views and doctrines, and by a laboured exegesis establish their correctness to a demonstration, but we have no claim to attention, and must leave such discussions to "older heads and better stored." The remaining inferences fairly deducible from the above case, are:

1st. That the operation hastened the death of the child.

2nd. That it was performed under an accumulation of unfavourable circumstances, viz. deficiency of a large portion of cerebral substance, an excessive hypertrophy of other parts, and also an exuberant growth of the cranial bones, their size and perfect union at the base of the skull effectually preventing any considerable degree of approximation, and therefore not affording the brain a sufficient degree of support and compression.

3d. That the result of this case affords no argument against the future performance of the same operation under more favourable circumstances.

4th. That the operation is most likely to succeed when performed early, and that it never can succeed when either of the above conditions exist.

5th. That the water should be discharged gradually, and that the establishment of a *fistulous opening* is feasible and judicious, allowing, when the external pressure is properly applied, a more steady and uniform approximation than can be obtained by any other mode.

6th. That the puncture should be made in the anterior fontanelle, and as far from the mesian line as possible—it being uncertain whether the superior longitudinal sinus holds its accustomed course, or may strike to the one side or the other, as in the above case.

Auburn, N. Y., July, 1835.

Improved Female Syringe. By Heber Chase, M. D.—The superiority which this instrument possesses, consists in its perfect adaptation to the anatomical form of the external organs of generation.

A, the cylinder, is about five inches in length, with a calibre of one inch. Projecting from its lower extremity, *B*, at an angle of about eighty-five degrees, is a tube of one inch and a half in length, and six lines in diameter, terminating at *C* by a male screw in the shield *D*, now to be described.

The shield is of a conoid form, produced considerably near the truncated summit, and laterally compressed; about four inches in length, half an inch in diameter at the apex, and has about three inches vertical and two inches transverse diameter at its base. The superior extremity of the vertical diameter rests against the cylinder of the instrument, while the inferior extremity is carried backwards and downwards so as to press on the perinæum a few lines posteriorly.

Upon the extremity of this shield is placed an ivory tube, *E*, extending one-third of its whole length. This tube, from its connexion with the shield at *C*, is gradually increased towards its extremity, and terminates with a diameter of ten lines, where it is perforated by from twelve to fifteen holes all around its bulbous extremity. The ivory tube may be removed from the shield at *C*, where it is attached by means of a screw. The shield itself may be removed from the instrument in the same manner, and at nearly the same point.